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What is claimed is:

- 1 1. A digital video communication system comprising:
2 at a source site,
3 an embedding circuit for embedding a digital watermark in a
4 digital video stream to produce a watermarked digital video stream; and
5 a multiplexer for multiplexing a text data stream with the
6 watermarked digital video stream to produce a multiplexed signal,
7 at a sink site,
8 a demultiplexer for demultiplexing the multiplexed signal for
9 recovering said watermarked digital video stream and said text data
10 stream;
11 a digital watermark detector for detecting the digital watermark
12 embedded in the recovered digital video stream; and
13 a synchroniser for synchronising the recovered text data stream to
14 the recovered digital video stream in response to the detection of said
15 digital watermark.
- 1 2. The digital video communication system of claim 1, further
2 comprising a digital overlay circuit for superimposing the synchronised
3 text data stream with the recovered digital video stream.
- 1 3. The digital video communication system of claim 1,
2 wherein said synchroniser comprises a memory.
- 1 4. The digital video communication system of claim 1,
2 wherein said synchroniser comprises a dual-mode memory.

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1 5. The digital video communication system of claim 1,
2 wherein said synchroniser comprises a pair of first and second memories
3 and a control circuit for alternately operating the first and second
4 memories in write and read modes in response to the detected digital
5 watermark.

1 6. The digital video communication system of claim 5, further
2 comprising a digital overlay circuit for superimposing the text data
3 stream read out of each of said first and second memories with the
4 recovered digital video stream.

1 7. The digital video communication system of claim 1, further
2 comprising at said sink site:
3 a copy protect circuit responsive to the detected digital watermark
4 for producing a copy management signal; and
5 an embedding circuit for embedding the copy management signal
6 in the recovered digital video stream as a second digital watermark for
7 preventing illegal duplication of the digital video stream.

1 8. The digital video communication system of claim 1, further
2 comprising at said sink site:
3 means for converting the detected digital watermark to a second
4 digital watermark; and
5 an embedding circuit for embedding the second digital watermark
6 in the recovered digital video stream.

1 9. The digital video communication system of claim 1, further

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2 comprising at said source site:

3 a video compression circuit for compressing the watermarked
4 digital video stream to supply an MPEG-2 transport stream to said
5 multiplexer;

6 an encryption circuit for encrypting the multiplexed signal; and

7 a forward error correction (FEC) encoder for encoding the
8 encrypted signal,

9 at said sink site,

10 an FEC decoder for decoding the encoded signal to recover an
11 encrypted signal;

12 a decryption circuit for decrypting the encrypted signal to recover
13 a multiplexed signal of said MPEG-2 transport stream and said text data
14 stream and supplying the multiplexed signal to said demultiplexer,
15 whereby the MPEG-2 transport stream and said text data stream are
16 individually recovered by said demultiplexer; and

17 a video expansion circuit for expanding the MPEG-2 transport
18 stream recovered by said demultiplexer to supply a signal corresponding
19 to said watermarked digital video stream to said watermark detector.

1 10. A digital video communication method comprising the
2 steps of:

3 a) embedding a digital watermark in a digital video stream to
4 produce a watermarked digital video stream;

5 b) multiplexing a text data stream with the watermarked
6 digital video stream to produce a multiplexed signal;

7 c) demultiplexing the multiplexed signal for recovering a

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8 watermarked digital video stream and a text data stream;

9 d) detecting the digital watermark embedded in the recovered
10 digital video stream and using the detected digital watermark as a timing
11 signal for reading the text data from said storage medium; and

12 e) synchronising the recovered text data stream with the
13 recovered digital video stream in response to the detected digital
14 watermark.

1 11. The method of claim 10, wherein the step (e) comprises
2 storing the recovered text data stream in a memory and reading the
3 stored text data stream from the memory in response to the detected
4 digital watermark.

1 12. A digital television receiver for receiving a digital video
2 signal in which a digital video stream and a text data stream are
3 multiplexed and the digital video stream is watermarked by a digital
4 watermark signal associated with the text data stream, comprising:
5 a demultiplexer for demultiplexing the digital video signal for
6 recovering the watermarked digital video stream and the text data
7 stream;
8 a digital watermark detector for detecting the digital watermark in
9 the recovered digital video stream; and
10 a synchroniser for synchronising the recovered text data stream to
11 the recovered digital video stream in response to the detection of said
12 digital watermark.

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1 13. The digital television receiver of claim 12, further
2 comprising a digital overlay circuit for superimposing the synchronised
3 text data stream with the recovered digital video stream.

1 14. The digital television receiver of claim 12, wherein said
2 synchroniser comprises a memory.

1 15. The digital television receiver of claim 12, wherein said
2 synchroniser comprises a dual-mode memory.

1 16. The digital television receiver of claim 12, wherein said
2 synchroniser comprises a pair of first and second memories and a control
3 circuit for alternately operating the first and second memories in write
4 and read modes in response to the detected digital watermark.

1 17. The digital television receiver of claim 16, further
2 comprising a digital overlay circuit for superimposing the text data
3 stream read out of each of said first and second memories with the
4 recovered digital video stream.

1 18. The digital television receiver of claim 12, further
2 comprising:
3 a copy protect circuit responsive to the detected digital watermark
4 for producing a copy management signal; and
5 an embedding circuit for embedding the copy management signal
6 in the recovered digital video stream as a second digital watermark for
7 preventing illegal duplication of the digital video stream.

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- 1 19. The digital video communication system of claim 12,
2 further comprising:
3 means for converting the detected digital watermark to a second
4 digital watermark; and
5 an embedding circuit for embedding the second digital watermark
6 in the recovered digital video stream.

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